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ABSTRACT

A technical note based on work in Indonesia covers designing and using simulations for training nonformal educators. The first section defines simulations and discusses situations when simulation is appropriate, participants, and considerations for trainers planning a simulation. A sample simulation about planning. "Why is Participation Important?" gives notes for trainer and participants, instructions for groups and role players, discussion of outcomes, results from using the simulation at six Indonesian teacher training colleges, and guidelines for evaluating the simulation. A section on designing simulations gives five steps (identify problems, plan activities, establish learning objectives, write directions, or write notes for trainers), and describes a second simulation, "Motivation and Participation among Women in the Community," including notes for trainer and participants; directions for monitors, secretary and community leaders; roles for community members; and outcomes. An appendix provides additional tasks and role cards. A summary lists five questions trainers should consider while writing simulations: what problem will learners experience; what means does the simulation give learners to resolve the problem; how do strategies (roles, groups, games) demonstrate extent and nature of the problem; how might what learners do and feel during/after the simulation express the complexity of real-life problems; and how will learners' participation give more understanding of the problems involved. (MH)

ED238605

The Indonesia Nonformal Education Project is part of a large-scale development effort of PENMAS, the Directorate of Community Education of the Ministry of Education and Culture in Indonesia. The project was financed jointly by the Government of Indonesia and by a loan from the World Bank.

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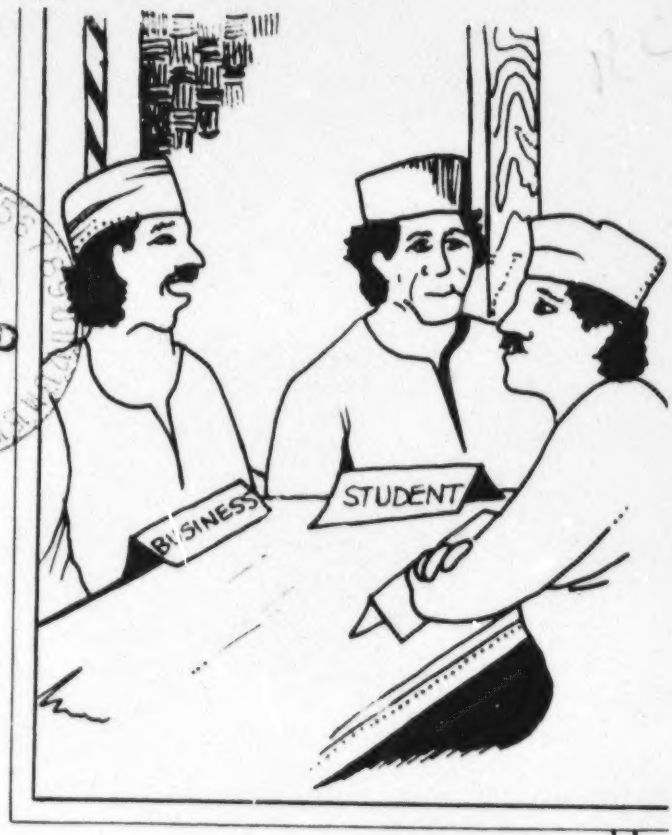

TECHNICAL NOTE NO. 20

DESIGNING AND USING SIMULATIONS FOR TRAINING

RC014324

NOTE WRITTEN BY: KATHLEEN CASH

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SUMMARY: This note explores the nature of simulations, outlines the steps involved in designing and conducting them, and discusses some of the issues arising from their use. It gives a number of examples from several types of simulations.

1. THE ECUADOR PROJECT: discusses the basic goals, philosophy, and methodology of a rural nonformal education project.
2. CONSCIENTIZACAO AND SIMULATION GAMES: discusses Paulo Freire's educational philosophy and the use of simulation games for consciousness raising.
3. HACIENDA: describes a board game simulating the economic and social realities of the Ecuadorian Sierra.
4. MERCADO: describes a card game which provides fluency practice in basic market mathematics.
5. ASHTON-WARNER LITERACY METHOD: describes a modified version of Sylvia Ashton-Warner's approach to literacy training used in Ecuadorian villages.
6. LETTER DICE: describes simple, participatory, letter fluency games which involve illiterates in a non-threatening approach to literacy.
7. BINGO: describes Bingo-like fluency games for both words and numerical operations.
8. MATH FLUENCY GAMES: describes a variety of simple fluency games which provide practice in basic arithmetic operations.
9. LETTER FLUENCY GAMES: describes a variety of simple fluency games which provide practice in basic literacy skills.
10. TABACUNDO: BATTERY POWERED DIALOGUE: describes the use of a tape recorder for feedback and programming in a rural radio school program.
11. THE FACILITATOR MODEL: describes the facilitator concept for community development in rural Ecuador.
12. PUPPETS AND THE THEATER: describes the use of theater, puppets and music as instruments of literacy and consciousness awareness in a rural community.
13. FOTONOVELA: describes the development and use of the fotonovela as an instrument of literacy and consciousness awareness.
14. THE EDUCATION GAME: describes a simulation/board game that illustrates the inequities of many educational systems.
15. THE FUN BUS: describes an NFE project in Massachusetts that used music, puppetry and drama to involve local people in workshops on town issues.
16. FIELD TRAINING THROUGH CASE STUDIES: describes the production of actual village case studies as a training method for community development workers in Indonesia.
17. PARTICIPATORY COMMUNICATION IN NONFORMAL EDUCATION: describes the use of simple processing techniques for information sharing, formative evaluation and staff communication.
18. BINTANG ANDA: A GAME PROCESS FOR COMMUNITY DEVELOPMENT: describes an integrated community development approach based on the use of simulation games.
19. USING CONSULTANTS FOR MATERIALS DEVELOPMENT: describes an approach to selecting and utilizing short-term consultants for materials development.
20. DESIGNING AND USING SIMULATIONS FOR TRAINING: outlines the steps involved in designing and conducting simulations and presents two simulations in detail.
21. Q-SORT AS A NEEDS ASSESSMENT TECHNIQUE: describes how a research technique can be adapted for needs assessment in nonformal education.
22. THE LEARNING FUND: INCOME GENERATION THROUGH NFE: describes a program which combines educational and income generation activities through learning groups.

TECHNICAL NOTES

This note is part of a series of Technical Notes based on the experience of staff members working with PENMAS, The Directorate of Community Education of the Ministry of Education and Culture in Indonesia, and with the Center for International Education at the University of Massachusetts. The two organizations have been working together on a project financed by the Government of Indonesia with the assistance of the World Bank.

Each note focuses on a particular learning material, training technique, or issue which grew out of the experience of developing a large-scale, national, nonformal education program in Indonesia. The notes contain whatever information was available at the time of writing. They present a summary of experience in the hopes that it will be of value to others struggling with similar problems in different settings. The notes represent work in progress and are not intended in any way to be evaluations, although care is taken to present whatever evaluation information is available on the effectiveness of the particular method being discussed. They are intended to be self-contained so that practitioners can immediately adapt them for use in their own settings.

As in all such projects, many people contribute directly and indirectly to the development of methods. The notes attempt to accurately credit those most directly involved, but invariably there are contributors who go unrecognized, particularly in a project which encourages participation at all levels. Throughout the five-year period of collaboration, there has been a pattern of extensive binational effort.

We encourage readers to share with us their reactions and particularly relevant, similar experiences which they may have had in other settings. The notes are available in English from the Center for International Education and will also be available in Bahasa Indonesia from PENMAS. Notes will be issued periodically as experience produces approaches which we feel would be of interest to other practitioners.

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INTRODUCTION

> In one corner, a man who works as a typist was being interviewed by two program planners, one of them busily taking notes as the others talked. At the back of the room, four planners had their heads together, carefully writing down suggestions on a piece of newsprint, under headings "Needs", "Objectives", "Competencies". In an adjacent room, still another group had cornered a businessman, all of them questioning him together. "Hurry up," said one of them, "We only have ten more minutes to get our plan together!"

The people described in this scene are neither program planners, typists, nor businessmen in real life. They are educators involved in a training activity where they take on roles and act out situations that as closely as possible imitate life. This activity is called a simulation.

Simulations are one form of activity used in nonformal education to promote participatory learning that is centered around the discovery and clarification of problems meaningful to the participants. Through acting out situations that replicate real life, the participants gain understanding of problems they may encounter in their work, and gain practice in dealing with these. Simulations encourage a different way of thinking about and dealing with problems than is typical of formal education.

The work described in this paper was accomplished with the participation, cooperation, and support of the staff from the Social Education and Out-of-School Education Departments of six teacher training colleges (IKIPs) -- Bandung, Jakarta, Medan, Semarang, Surabaya, and Ujung Pandang -- particularly Pak Sayuti, Pak Unus Anis, and Ibu Augustina Nasution from IKIP Medan and Pak Hamzah, the Director of the provincial level PENMAS office (BPM) in Medan, North Sumatra.

In this Technical Note, two examples of simulations used in Indonesia, as part of the PENMAS Nonformal Education (NFE) Project*, will be described as the context for exploring the nature of simulations, the steps involved in

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* PENMAS (Directorate of Community Education of Indonesia) collaborated with IKIPs (Teacher Training Institutes of Indonesia) to train nonformal education field-workers as part of the World Bank Sixth Education Loan to Indonesia beginning September 14, 1977.

designing and conducting a simulation, and some of the issues involved in using this form of learning activity over others.

One of these, which we will look at first, was a simulation called "Why is Participation Important: A Short Simulation About Planning." It was used as the introductory session of a series of workshops for teachers from six teacher-training colleges. The other, called "Motivation Among Women in the Community," involved women community leaders in nutrition education who were being encouraged to support PENMAS projects in their respective communities.

Simulations are very different in form and content, depending on the problem being addressed, the interests and backgrounds of participants, and the skill of the trainer who plans them.

DEFINING A SIMULATION

A primary objective of the PENMAS NFE Project was to introduce into a formal education teacher training environment a new curriculum for training community education fieldworkers. Inservice training had three general goals: to encourage understanding of a process of program planning particularly applicable to a NFE program; to train staff in how to develop a NFE education competency-based curriculum; and, to train staff in how to teach using problem-solving, participatory methods. This last was critical for transforming the curriculum in the training colleges.

Within an education setting, the pervasive methodology reflects the distribution of power or authority within that environment. At the Indonesian teacher training colleges, the most common method of teaching, termed "diktat" or the lecture method, reflects what Paulo Freire describes as the "banking system" of education. Essentially, the teacher reads notes while the students write down what is read. There are few questions and little dialogue or discussion. Students are essentially passive; they are not active participants in their learning.

One of the basic goals of nonformal education, on the other hand, is to encourage maximum participation and involvement of the learners -- as well as the trainers and teachers -- in their learning. Thus, it was important for PENMAS to introduce nonformal methods of training for college staff, who would in turn use these methods in their work as community fieldworker/trainers. The simulation was one form of activity used for this purpose.

"Why is Participation Important:
A Short Simulation About Planning"

This simulation used to introduce a series of workshops called "The Program Planning Process." It involved representatives from six teacher training colleges and three foreign resource persons. It was designed to train the six representatives to be head trainers for the remaining workshops, which would involve up to twenty people at each, conducted at the various college campuses. The objective of the simulation was to enable the teachers to participate in a NFE problem-solving learning activity and to initiate the workshop on planning.

The participants in "Why is Participation Important?" had been given roles. Some were program planners, divided into three separate groups, whose task was to develop a curriculum for a typing school. Others played roles as prospective students, employers, and working typists. The groups of planners were each given access to different information (including interviews) from which to draw up their plans. When the time was up, they all gathered together to compare their plans and to discuss their experience. They discovered the importance of gathering quantities of varied information for making effective program plans.

What is a simulation?

A simulation is a problem-solving learning activity that attempts to imitate, or "simulate", a real-life situation. A form of drama, it may involve the acting out of a story, the playing of roles, or participation in a game. But unlike a short drama or skit, the simulation has learning objectives, involves many persons playing roles, and has unpredictable outcomes. The activity is centered around a problem of concern to those involved, which becomes clear to them in the course of their participation.

The activity is both controlled and open-ended. The scenario or description of roles is carefully designed by the trainer or facilitator, but both the unraveling of the problem and the outcome are unpredictable for either trainer or participants. The learners interact as though the problem situation were real, and in their involvement, they become aware of real complexities. What they learn through their participation encourages them to reflect upon past experience and to anticipate future situations. Their discussion of the experience, with the help of the trainer or facilitator, raises questions of how to meet anticipated problems.

For this workshop, a method was needed to introduce the workshop and expose participants to a real-life problem in planning. The most immediate problem for planners to consider is the need to consult, interview, and gather information about all people who may be involved before, during, or after the development of an educational program. The simulation was chosen as an effective nonformal education method for introducing the workshop on planning and for stressing the importance of a comprehensive needs assessment as the first step in the planning process.

Why do a simulation?

A simulation attempts to create a situation that learners may encounter in real life. In the course of the activity, they are confronted with the ambiguities and complexities that may occur in their lives. Particularly when learners are inexperienced in the workplace, the simulation can present the unfamiliar in a realistic manner. Thus it can pose problems learners may not yet have encountered and help to clarify the nature and extent of these problems. Learners discover that there may be a number of ways to approach or solve these problems. The simulation, then, gives participants the opportunity to experience indirectly what they may experience on the job in the future.

During the simulation, the planners were required to gather information before drawing up their plans. Because of this activity, and because they could compare the difference in plans based on less or more comprehensive information, they recognized the complexities inherent to the planning process. The participants were exposed to the effects of needs assessment and participation on a program plan in a direct, real-life manner.

When is a simulation an appropriate activity?

A simulation is a good learning activity when the trainer would like a high degree of participation or activity from the learners. It is particularly effective as a warm-up activity at introductory sessions at conferences, workshops, classes, and courses. It encourages participants to focus on the problems at hand and is a good means of energizing them and creating interest and enthusiasm for the project. Because there is usually human interation during a simulation, it is a good means of getting participants to relax and

to know each other. There is no test of knowledge during a simulation, which encourages a spirit of friendliness and cooperation.

A simulation may be used to vary the pace of a workshop, when there is a lull in the activities. However, because simulations usually require considerable time, they should be scheduled when uninterrupted time is available. And because they require active participation, mornings are best.

> *The simulation was used to introduce the workshop theme and to engage the teachers in a method of nonformal education. The participants could immediately focus on the concepts and problems concerned with planning. At the same time they immediately became involved, therefore alleviating some of the initial restraint felt in other workshop or training situations.*

Who are the participants?

Although a simulation may seem to require considerable abstracting ability or sophistication in life experience, learner flexibility is most important. Regardless of levels of formal schooling or age, willingness to participate is most often associated with learner flexibility. In fact, learners with fewer preconceived notions of what constitutes learning or appropriate teaching methods, are often more willing to participate.

> *"Why is Participation Important" was first tried out with teachers from six teacher training colleges. Later it was used with 150 students who were recent graduates of secondary school. In all cases, willingness to participate was most often associated with learner flexibility.*

Simulations may be of many kinds and degrees of complexity, and it is up to the trainer to adapt the activity to participants involved. Literacy, for example, is a prerequisite for participation only if there are complicated written directions or instructions to take notes.

What must a trainer consider when first planning a simulation?

The purpose of the simulation must be clear. What problem or problems are to be addressed by this learning activity?

The nature of the activity and the learning outcomes expected must be carefully worked out. What will the participants be doing during this given

time period and how can interaction be fostered? What will they learn from the interaction?

Details of the activity must be pictured in advance. The trainer should write out explicit notes. 1) for the trainer, and 2) for the trainees. In preparing these, s/he should consider:

For the Trainer:

How to explain the simulation activity to the learners

How to organize the activity (direction for roles, for division into groups, time scheduling, etc.)

How to facilitate the discussion (processing) session at the end of the simulation.

For the Participants:

What are the learning goals of this activity?

What are the possible outcomes and limitations of the activity?

What roles are to be played and by whom?

What are learners supposed to do in the course of the activity?

What is the time schedule?

What materials are needed for their activity?

Once the trainer has thought through these questions, it is time to set them down in writing. The following pages are the copies of the notes and instructions the trainer wrote for the simulation "Why is Participation Important: A Short Simulation About Planning."

A SIMULATION: EXAMPLE

"Why is Participation Important?"

Notes for the Trainer

A. Beginning:

1. Explain the general objectives of this learning exercise to the participants and write these on a blackboard or piece of newsprint.
2. Divide the participants into three groups (I, II, III), leaving three to six other people who will play roles as students, businesspeople, and typists.
3. Give each group their instructions. Be sure they are separated so they do not communicate with each other. Explain that you will go around to each group to answer questions, but that they should not ask questions at this time.
4. Give each group a sheet of newsprint. Explain that they should write their program plan on this.
5. Ask each group to select a reporter who will explain that group's plan to the other groups.
6. Give the role players their instructions and name tags ("STUDENT", "BUSINESS", and "TYPIST"). They should not be allowed to talk to each other.

B. Reporting Back:

1. When plans are completed, ask all participants to come together. Ask each group's recorder to explain their plan to the others.
2. After each group's presentation, lead a discussion on the strengths and weaknesses of the plan.
3. When all three groups have presented, lead a discussion comparing the three.
4. After this general discussion, hand out the entire instructions for the simulation so that each group will know what the other groups' instructions were and what the roles were. Allow time for participants to thoroughly read the simulation.

C. Discussion:

Facilitate a general discussion where the entire group will consider what happened, what they learned, what the activity pointed out about needs assessment and participation, and what the learners think about the effectiveness of the simulation.

Be sure to leave enough time for discussion.

Notes for the Participants

The following are the general learning objectives for this simulation learning activity.

a. To examine the importance of effective planning.

b. To identify important components of a comprehensive program planning process.

c. To look at what happens when the planning process is not comprehensive and to discuss what may happen.

d. To experience a nonformal education training method.

e. To understand the significance of a nonformal education teaching method as a participatory, problem-solving experience.

f. To discuss the relationship between participation and needs assessment when planning a program.

Schedule for the simulation: Total time - 2 Hours and 15 Minutes (Approximate)

a. Directions - 10 minutes

b. Group work - 45 minutes to 1 hour

c. Break - 10 minutes

d. Report out - 15 minutes total for each group; 10 minutes for explanation of plan and 5 minutes for discussion - totaling 45 minutes

e. General discussion and processing session - 30-45 minutes.

This time schedule will be posted on the wall so that participants will have an idea of their time limitations. Please keep track of the time while you are working on your plans.

Instructions for Groups

- -

Group I. You have 45 minutes to plan a one-year typing course for approximately ten students. During this time you must list the needs, competencies and objectives for this learning program on the paper provided to you.

You should interview three of the ten students who will be attending the course. These interviews will help you plan the course. But you are only allowed to talk to or interview these three potential students.

Then, as a group develop a chart that will generally describe the competencies, objectives and needs for the learning program.

Be sure to select a reporter who will describe your plan to the rest of the participants at the workshop. You will have 15 minutes to describe your plan, what it is and how you developed it, and to answer any questions about it.

- -

Group II. You have 45 minutes to plan a one-year typing program for approximately ten students. During this time you must list the needs, competencies, and objectives of this learning program on the paper provided to you.

Before you begin the planning, you should interview students who may attend the course, members of organizations and businesses where these students could potentially work and a representative sampling of people who already work as typists in Jakarta. Choose people from your group to interview these representatives.

After the interviews, tabulate and discuss your information and develop a chart that will list the competencies, needs, and objectives for this one year program for potential typists.

Be sure to select a reporter from your group who will describe your plan to the rest of the participants at this workshop. You will have 15 minutes to describe your plan, what it is and how you developed it, and to answer any questions about it.

- -

Group III. You will have 45 minutes to plan a one-year typing program for approximately ten students. You have been given a directive from PENMAS (The Community Education Department) to develop a plan and to describe this plan to the workshop. This plan should list the needs, competencies, and learning objectives for this one-year program. During the planning period, you are not allowed to talk to anyone else at the workshop. If you have any questions, you can ask the leader of the simulation.

List the competencies, needs and objectives on the paper provided to you. Be sure to then select a reporter who will describe your plan to the rest of the participants at the workshop. You will have 15 minutes to describe your plan, how your group developed it, and to answer any questions about it.

Instructions for Role Players

- -

Role I. You are three students who would like to enter the year course in typing about which you have recently heard. But most of you are from rural areas, and you do not think you will have enough money to complete the program. All of you have enough money to complete the first few months, but you are worried that you do not have enough funds for the entire year. You are hoping the school will provide money for your schooling as well as for your room and board. In addition, you all think that a one year course is not enough for a certificate and would like to go to school for two or more years, if acceptable to the planners or school.

- -

Role II. You are all from organizations and businesses that hire typists. You will not hire typists unless they can type 60 words per minute. You also give a spelling test to all potential typists that may work for you because in the past many typists you hired did not know how to spell and therefore did poor work. You expect that a typist must have at least two years of typing school or a typing certificate.

Recently, you decided to pay for the schooling of potential typists or for students who would eventually work for your organization or business. You would do this by setting up a contract with individual students who would need money for schooling and would want to work for you.

- -

Role III. You are three typists who graduated from a typing school two years ago. One of you cannot find a job because he can only type 40 words per minute and spells poorly. One of you thinks that typing schools should not only teach spelling but also bookkeeping. You know from experience that if you know bookkeeping, you would find a better job. A third person in your group works for an office that has many personnel problems. She feels that typing schools should teach future typists how to organize their work, how to keep records and how to work with other office personnel. All of you feel that typing schools should address these issues, since you all have experienced problems due to inadequate training.

Outcomes of the Simulation

The participants responded very favorably to this learning activity. As expected, Group I came back with the most comprehensive learning plan, Group II had a moderately good, but incomplete plan, and Group III had a very vague, general outline for their plan.

After each group explained their plan, a general discussion followed where the participants compared the three plans. Here some confusion arose as to the actual purpose of the simulation. Some of the participants felt cheated because they had not received the same information as the other groups. Because their plan was not as comprehensive as the others, they felt that somehow they had failed the learning activity.

What became clear to the trainers is that the participants took their role in the simulation very seriously and did not immediately distinguish how the simulation was different from other learning activities where learners succeed or fail.

The trainers used the word "game" to alleviate some of the tension between the participants. But, in fact, a simulation learning activity is not a game though it may have a game within its instructions. The trainers learned that the use of the word "game" to describe a simulation learning activity was also inappropriate for the participants involved. People often do not feel that they can learn anything from a game. Some feel that a game is for play, not to be used as a teaching or training method. The use of the word "game" to describe a simulation learning activity may mislead participants into thinking that the activity is not worth taking seriously. From then on, the trainers deleted the word "game" and described the simulation for what it is -- a learning activity that replicates a real-life situation.

At this point the trainers handed out the instructions for the entire simulation. The trainers explained that the objective of a simulation was to imitate a potential real-life situation, and that it was built into the simulation that some groups' plans would be better than others. After reading the instructions for the entire simulation, the participants better understood the goals of the simulation learning activity.

A most critical part of a learning activity such as a simulation is the discussion, dialogue, or processing after the activity part of the simulation has been completed. Some of the discussion questions that were generated during the discussion were:

- Why is it important to do a comprehensive needs assessment, and to get as much participation as possible from the beginning of program development?
- What are some techniques for effective needs assessment?
- What can happen to a plan's development without adequate participation from the beginning of a program plan?
- What are different types of participation that can occur before, during, and after program development?
- How can needs assessment be utilized throughout a program's development?

The discussion questions and answers following this simulation also concentrated on the past experiences of the participants:

- From your own experiences what were some effective needs assessment techniques utilized?
- What were the consequences of programs that had had no participation from the beginning of the program.
- Have you had similar problem(s) as demonstrated by the simulation?
- How can these problems be avoided?
- How do you know when you are doing effective needs assessment?

If the participants had had no previous experience designing an educational program, the trainer could generate questions such as:

- How can needs assessment be integrated effectively into the continuous development of an educational program?
- From your participation in the simulation, how can planners decide where to begin to get participation from the beginning, such as whom to interview, where to find out information that may be beneficial to the program, etc.
- What types of needs assessment are most appropriate for what type of participant?
- How do you know when you are getting enough or accurate information?
- In the future, what questions might you ask yourself before you begin designing an educational program?

Other contexts

The simulation was subsequently conducted at six teacher training colleges with as many as 20 participants at each workshop. For the most part, participants understood the goals of the simulation and thoroughly enjoyed their participation. Many expressed enthuasiasm about the active nature of the simulation learning activity. By starting the workshop with a simulation learning activity, they immediately felt involved and interested. Some felt it was a great relief to participate in a simulation rather than listen to a lecture. Some felt that their participation in the simulation was not only exciting, but also that the simulation content clarified the significance of getting participation from the beginning of a program's development and how

an education program could be a detriment to the learners if an effective needs assessment was not conducted.

The simulation was then tried out with 150 first-year students at one of the teacher training colleges. From these 150 students, 19 students were selected out to play roles. They were given their instructions and signs designating who they were and sent to a separate room.

The remaining students were divided into twelve groups. Four groups were given directions for Group I, four groups for Group II, and four groups for Group III. When representatives from the groups wanted to interview people playing roles, they went to the next room. After about 1 1/2 hours (longer time was given due to the number of participants), each group taped their learning plan to the wall. Then one representative from each group came to the front of the room to explain their group's plan. Students from other groups could add comments at the end of each explanation. At the end of these explanations, each group, including the individuals who played roles, received a set of instructions for the entire simulation. One student in each group read these instructions to his/her group.

Because of the large number of participants, a general discussion after the "activity" of the simulation was difficult to conduct. If there had been more time, the students from all three groups could have joined for discussion. Lack of time and the size of group resulted in the simulation being cut short. There was no time to conduct a general discussion.

This was an important lesson for the trainer. When the number of participants in a simulation learning activity changes, usually the time needed to conduct the simulation will change. Also, the trainer should have a good idea of the facilities, the size of the room available, and the number of participants before the simulation begins.

Nevertheless, the response of the students during and after the simulation was remarkable. Once the directions were explained the students organized themselves into groups and took the activity very seriously. Afterwards they came up to the trainer and requested that they participate in similar learning activities. One student commented that from this simulation activity he had a clearer idea of how to begin planning an education program in the community. Many students stayed after the class to discuss their program plans and the simulation until they were forced to leave by another class that needed the room.

Trainer observations: evaluating the simulation

The teachers and trainers who participated in the simulation or observed it met to discuss the experience. They had several main questions in the course of the discussion.

1. *Might not a simulation learning activity lead to chaos so that I, as the trainer, will lose control of the students or the trainees?*

The practice of this simulation with 150 students demonstrated that a simulation can be done with a large number of people. Much has to do with how well a simulation is planned prior to its implementation. If a simulation is well planned, the trainer will not lose control. The fear of losing control may be related to the power a teacher feels s/he has lost when an activity becomes learner-centered rather than teacher-centered. Also, this fear may be related to how the trainer feels a teacher should behave and teach. And, too, for most teachers or trainers, a change in teaching method is difficult especially if one has been using the same teaching style for many years. A change in teaching method should be tried out gradually with the trainer's belief in the underlying philosophy of the new method.

2. *How does this type of activity help the student better understand problems? Isn't it likely that the learner will only see this as a game and think that s/he is not really learning anything?*

In a formal educational setting, where students and teachers are familiar with the lecture method, there may be the assumption that learning through lecture and teaching by lecturing is the "only way". Because it demands involvement of the learner and interaction with other learners in a problem situation, a simulation is a replication or imitation of a real-life situation. For this reason, some may see a simulation as not something connected to learning and teaching. These people separate learning and teaching from life. For them, life is something outside of the school or the educational setting. Learning happens only in the school where students are filled up with knowledge.

To counteract some of this thinking, first, the instructor should believe in the value of a simulation learning activity. Second, the general discussion at the end of the activity must be comprehensive. If the learners are left hanging without dialogue or discussion about the outcomes of the simulation, they may only perceive the activity as a game. Through discussion the

trainer should encourage the learners to better understand what happened during the simulation and how they can apply that knowledge to life. Third, the simulation should be related to actual problems that the learners have encountered in the past or may encounter in the future.

3. *A simulation is not always suitable for every topic being covered. How do I decide when a simulation is an appropriate learning activity to use?*

A simulation is a problem-solving activity that helps people to better understand a problem related to human interaction. Therefore, a simulation is not suitable for passing information or giving directions in a short amount of time, nor when the purpose of the course is training in practical skills (e.g., how to operate a motorcycle or fix a bicycle).

Like any other method, simulations as learning activities should not be used all the time. They should be used intermittently with other activities when appropriate to the issue or problem being considered.

4. *How do you write a simulation?*

This question was the one most often asked by the learners and participants, particularly by the staff of the teacher training colleges. The next section will describe how to write, test, and adopt a simulation in accordance with the needs of the participants.

DESIGNING A SIMULATION

Designing a simulation, as well as writing out the instructions to make it happen effectively, is difficult and time-consuming for someone who has never done it before. For the beginner, it would be good to think through, write, and try out a short simulation, improve on it, and try it again. Reading simulations or about them, or even participating in one, is not the same as sitting down and planning one or being the person responsible for making it happen from beginning to end. Only when you have written and tried out a simulation can you appreciate how valuable this learning activity can be for both learners and yourself, the trainer.

In the preceding pages, the written notes and instructions for the simulation on planning were reproduced in full. Now, let us look more closely at the steps the trainer took in designing the simulation.

1. Identify the problem.

What do I want the participants in this simulation to learn or think about? What problems should they be led to experience and consider?

For the simulation, the trainer considered how to create an activity to demonstrate the importance of participation from the beginning of program development and the need to gather all the important information required for an effective program plan.

2. Plan the activity.

How will this problem be dramatized? What is the setting? Who are the actors? Will there be groups? Doing what? The trainer should think through and take notes on just how the participants will act out, dramatize, or help to create the setting for the problem. Will participants have roles? What roles will these be? Will the participants represent groups? What are the main groups or characters? What are their main concerns? The trainer should decide what goals are to be specified for the participants in the simulation. What will they have to do and why will they want to do it?

The trainer decided that each group would be given different information. Because they had different information, their learning program plans would be different: One plan would be better than the others and one worse. These plans would be different because of the type of participation and needs assessment each group did. Thus, it became necessary to have some participants play roles of people from the community who may have some relationship to the program. The plans would differ because some groups would have contact with information or people from the community and some groups would not.

The goals for the participants in the simulation were to write out a learning program with needs, competencies, goals. Each group would have different instructions on who they could interview from the community in order that they write up their learning program plan. Other participants would act out people from the community who had specific information to give the program planners.

3. Establish learning objectives.

What will participants learn from their activity? Participants will have goals, or objectives, as they play their roles. These are different from what they will learn from their activity. The trainer should identify what the possible learning outcomes can be from the activity s/he has designed. How will the simulation help the learners to better understand the problems presented? What will their interaction in the activity help them to understand?

The objectives can be both general and specific, but the trainer should think out the possible results before s/he begins:

> *One general objective for the simulation was to identify important components of the program planning process. A specific objective related to this general one might be for the participants to list three components that are part of the planning process.*

Many trainers do not want to introduce such detail into their instructions. But it is important to write down just what you would like the learners to know as a result of their participation.

4. Write directions.

The trainer should write out material that will be given to the participants at the beginning of the simulation. These include specific directions concerning the roles people will play, the tasks they must perform, the ways they should organize their interaction, and the time they have to do this. It also must include a description of the general learning objectives for the simulation, so that participants will know why they are doing the activity.

> *Look at the instructions for the groups and role players. Note that the trainees are given the learning objectives, with the directions, time schedule, etc., so that they are aware of why they are doing the learning activity.*

5. Write notes for the trainer.

What am I going to do while the simulation activity is in session? Planning a session is different from being involved. Although a simulation is unpredictable once it begins, there are aspects that must be controlled, and the trainer is the person responsible. The trainer should plan how to divide people into groups or roles, how to explain the simulation, what to write down for everyone to see on a blackboard or newsprint, what important points to emphasize before the simulation begins, etc. Most important, the trainer should consider how to facilitate the general discussion at the end of the activity and how the participants will report out what happened during the simulation learning activity.

> *See the section "Notes for the Trainer." Note that the trainer has written down how s/he will explain directions to the learners as well as what general questions will be asked during the general discussion at the end.*

ANOTHER SIMULATION

"Motivation and Participation Among Women in the Community"

> A group of women were gathered together, all of them seemingly talking at once. One was complaining about her husband's refusal to let her leave the house; another was describing her child's illness; two others were arguing loudly with each other. Some were asking questions, listening, taking notes. At a certain point, the voices died down, as one of them, standing at one side, asked for quiet. "What, then, can we say are some of the reasons why people in the community find it hard to come to the meetings?"

These women are community leaders engaged in starting nutrition education programs in their respective communities. They have been concerned that many women are not attending meetings. This morning, they have been participating in a simulation designed to help them better understand problems of motivation. Each woman has been acting out a different role: some have played the part of women in the community who have a variety of reasons for not wanting to participate in the nutrition project. Others have played the role of the community leader interviewing these women concerning their problems and trying to persuade them to attend. Others have been the "secretary" and "monitor", whose roles are to observe the interaction.

Now they have gathered together to discuss what they have done during the activity, to identify the complexities of the situation, and to discuss solutions. By playing out a "real-life" situation, they have all come closer to understanding the problems involved in motivating people to participate in educational projects. In the course of their "game", they have also learned much about participation itself.

Notes for the Trainer

This simulation should function as a discussion starter and as a means for clarification of the multiple problems that affect motivation and participation of women in community education programs. After the participants finish the task, they should discuss the simulation and list not only problems that affect participation, but also recommendations for solutions to these problems.

1. Divide all participants into small groups.
2. Appoint one person as a secretary and one person as a monitor for each group.
3. Appoint one or more community leader(s) for each group depending on the number of participants.
4. Hand out instructions to the secretaries, monitors, and community leaders.
5. Hand out role cards to the community members in each group. With these cards hand out name tags so that the community leader can identify each community member by name.
6. Write the time schedule on a blackboard or newsprint and explain that all groups have approximately 30 minutes to complete Task I. Be sure everyone begins Task I at the same time.
7. After Task I is completed, as well as the discussion after the task, one monitor and one secretary from each group should describe to all participants the problems and recommendations they have recorded from their community. Then all participants should list the problems they observed that affect motivation and how the community leader can facilitate problem-solving for community members.

   This last part (7) of the simulation is very important. This will help the participants understand the significance of the simulation. The discussion at the end should help clarify the objectives of the simulation and what people have learned from the simulation. Be sure to allow enough time for adequate discussion at the end of the simulation where recommendations can be made.

Notes for the Participants

The following are the general learning objectives for this simulation learning activity.

a. To identify problems in a community that affect women's motivation and participation.

b. To clarify the relationship between the community leader and community members and how this relationship influences participation.

c. To examine how the community leader can instill motivation in community members.

d. To make recommendations on how the community leader can help facilitate problem-solving in the community.

Time Schedule for the Simulation: Total time - 1 hour and 30 minutes (approximate)

a.	General explanation	- 10 minutes
b.	Task I	- 30 minutes
c.	Small group discussion	- 20 minutes
d.	Report out and general discussion of all participants	- 30 minutes

This time schedule will be written on the wall so that participants will have an idea of their time limitations.

Directions for the Monitor

Your job is to lead the simulation in your group and to keep notes on what you observed during the simulation.

1. Read the simulation
2. At the end of Task I bring your community together to discuss what happened.
3. All members of the community should read their role and the back of their card to the rest of the community.
4. The secretary should read his/her notes on what was observed during the interviews.
5. You should read your notes on what you observed during the interviews.
6. After each person has read his/her role, the group should discuss:
   a. how people felt during the simulation
   b. what problems they were aware of
   c. how the community leader tried to motivate people
   d. what recommendations they would make to a community leader who had to confront and help people resolve similar problems.
7. Your community should have a list of recommendations as to how a community leader can encourage motivation in a community and how the community leader can help solve problems that inhibit motivation.
8. You and the secretary will then present the results from your community to the participants. At the end of the simulation your community should have produced:
   a. a list of problems that prevent community participation among women
   b. a list of recommendations for community educators to help community members resolve these problems and to encourage motivation.

Directions for the Secretary

Your job is to observe and to record what you see happening in your community. At the end of Task I, you will report back to your community on what you observed during the simulation. You should not participate in the conversations between the community members and the community leader. You should keep to your role as an outsider whose job is to listen, to observe, and to record. While you are observing the interviews or meetings between people in the community and the community leader, keep note of the following:

1. What seem to be the problems for people in this community?
2. What are the needs of the community people?
3. How does the community leader interact with community members?
4. What seems to be preventing motivation or participation among women in this community?
5. How does the community educator encourage people to participate?
6. What methods does the community leader use to help people solve their problems?
7. What are the results of the conversations between the community women and the leader?

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Directions for Community Leaders

You are a leader in the community who has decided to teach the women about nutrition. Many children in your community have illnesses such as stomach problems, skin diseases, and diarrhea. You have consulted a nurse and you think these illnesses are related to poor diet, poor eating habits, and poor habits of cleanliness. You have decided that before you can get people to change their habits, you must find out what these habits are and you must get people motivated to change them. As the community leader, you have one general objective:

> To get all the women you visit to come to a community meeting.

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*Task I (30 minutes)

You have 30 minutes to visit each woman in your community. Your objective is to have each woman individually agree to come to a meeting at your home to discuss nutrition. Many of the women have specific problems that may prevent them from coming to the meeting. Thus, they may seem poorly motivated. It is not clear to them that nutrition is a problem in this community. You must try to convince them (as many women as possible) to come to this meeting. Remember you have 30 minutes to convince them. Record the results of your visits on the check list provided.

*Note: The original simulation had three tasks. Tasks 2 and 3 are given in the appendix along with role cards for community members.

Community member roles were written out on cards with instructions on both sides of each card.

Roles for Members of the Community

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Card 1 Ibu Tuti (Side 1)

Your family is very poor. You have nine children and your husband works on one of the rubber plantations tapping rubber trees. At present two of your youngest children are sick and you are very worried about them. You have very little time except to go to the market, wash, clean and take care of your sick children.

You are usually very friendly and like to spend time going to the market and talking to friends there. You enjoy visiting people but right now are too worried about your children to be your usual good-spirited self.

Card 1 Ibu Tuti (Side 2)

DO NOT SHOW THIS SIDE OF THE CARD TO THE COMMUNITY LEADER

While the community leader is meeting with you, you must make a decision and tell the leader what you decided.

YES You will go to the meeting if the community leader can get you some medicine for your children or you can find a nurse or doctor who can tell you what is wrong with them.

NO You will not go to the meeting if the community leader cannot promise some help for your sick children.

- -

Card 1 Ibu Siti (Side 1)

You are an older member of the community. Although you have seven children, only two are now living at home with you. You are usually shy and do not like to start conversations. People in the community know you as a dependable person who does what you say you will do. You have been responsible for helping many people in this community.

Card 1 Ibu Siti (Side 2)

DO NOT SHOW THIS SIDE OF THE CARD TO THE COMMUNITY LEADER

YES You will agree to go to the meeting if the meeting is conducted in the local language, Bahasa Batak. Because you do not speak the national language, Bahasa Indonesia, and because you are shy, you do not want to go to the meeting unless someone will help you understand what people are saying.

NO You will not agree to go to the meeting if it is conducted in Bahasa Indonesia or if there is not someone there who can translate what people are saying.

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Card 1 Ibu Rahayu (Side 1)

You are an outgoing person who because of your somewhat aggressive personality have acquired a few enemies in this community. You like to tell other people what to do. You also feel that you do not want to waste time at a meeting unless there is some money in it for you. In other words, you would like to participate in something that would be of economic benefit to you and your family.

Card 1 Ibu Rahayu (Side 2)

DO NOT SHOW THIS SIDE OF THE CARD TO THE COMMUNITY LEADER

YES You will agree to go to the meeting if you are sure that Ibu Tuti will have no power or leadership at the meeting. You had a disagreement with her a few months ago and friends have told you that she is spreading rumours about you. You want as little contact with Ibu Tuti as possible.

NO You will not agree to go to the meeting if Ibu Tuti leads the meeting or if you have to talk directly to her.

- -

Card 1 Ibu Mariana (Side 1)

You are a quiet woman who is dominated by your husband. You are conscientious and a very hard worker though your family has very few resources. Most of your family is dead so you have your husband and your five children for support. You are interested in going to meetings and involving yourself in women's activities in the community but do not want to cause trouble between you and your husband; you think he will disapprove.

Card 1 Ibu Mariana (Side 2)

DO NOT SHOW THIS SIDE OF THE CARD TO THE COMMUNITY LEADER

While you are talking to the community leader, you must make a decision and tell the community leader what you decided.

YES You will agree to go to the meeting if the husband of the community leader will convince your husband that this meeting may eventually lead to some economic benefit to your family. Your husband feels that this meeting will be a waste of time and take you away from your family responsibilities.

NO You will not agree to go to the meeting unless your husband agrees to your going. This will happen if the husband of the community leader talks to your husband.

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Outcomes of the Simulation

The thirty women who participated in this simulation represented community leaders from North Sumatra. The workshop was conducted to encourage them to support and facilitate community education programs of PENMAS in their respective communities.

The reaction to this simulation was very favorable. The participants were enthusiastic and took the simulation activity very seriously. There was a lively discussion at the end about recommendations for motivating women in the community to participate in educational programs.

One of the problems with the simulation was that there was so much information from each group that when all the participants came together, there was no clear way of collating their information. The head trainer suggested that the community leaders fill out a check list to keep track of the results of their conversations with community members. The following check list was created and given to each leader.

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Community Leaders Check List

After you complete each task, check the results of your meetings with the individual women from the community.

	Task I: To attend the meeting		Task II: To make a food chart		Task III: To change a food habit	
	YES	NO	YES	NO	YES	NO
Ibu Tuti						
Ibu Siti						
Ibu Rahayu						
Ibu Mariana						
Total:	Task I: _____		Task II: _____		Task III: _____	

- -

SUMMING UP

There are five basic questions a trainer should ask him/herself while writing a simulation. Let us compare the form and content of the two simulations, No. 1"Why is Participation Important: A Short Simulation about Planning"and No. 2"Motivation and Participation Among Women in the Community," by asking ourselves these five basic questions:

1. *What is the problem the learner will experience by participating in this simulation?*

In simulation No. 1, the problem for the learners was how to write an education program plan with certain or limited amounts of information and participation from the community. In simulation No. 2, the problem was how to get women in the community to attend a meeting about nutrition. In both these simulations the problem had something to do with participation from the community.

2. *What means does the simulation give the learners to resolve the problem(s)?*

In simulation No. 1 the learners were given the opportunity to create a program plan with limited amounts of information from the community. Some groups had the opportunity to gain information and participation from the community; others did not. In simulation No. 2 the learners had the opportunity to talk to members of the community and to try to convince them to attend the meeting on nutrition.

3. *How do the strategies (roles, groups, games, etc.) in the simulation demonstrate the extent and the nature of the problem(s)?*

In simulation No. 1, there was a hidden agenda where not all the groups were given the same amount of information. This hidden agenda pointed out how the absence of participation from the beginning can severely limit the effectiveness of a program plan. In simulation No. 2 the community leader had to visit a community member and try to convince her to attend a meeting without the community leader fully knowing the nature of the member's problems and seeming lack of motivation. This strategy pointed out the hidden, complicated, and not always solvable problems that inhibit women's participation in community programs.

4. *How might what the learners 'did' and what they 'felt' during and after the simulation express the complexity of the real-life problem(s) in the simulation?*

In simulation No. 1, the program plans differed according to the different information available to the planners. While the planners of Group III may

have felt relieved that their plan was easier to do than that of Group II where they had to interview three representative people from the community, the result was a clear difference in the comprehensiveness of the two plans. The learners may have felt cheated by or proud of the plans they had produced, but the simulation pointed out how participation can dramatically affect the quality of a program plan.

In simulation No. 2, the outcomes were more open-ended. The individuals who played roles of people from the community were more in control of whether they would attend a meeting or not. And the community leader had to use his/her personal or social skills to convince them. The outcomes expressed the frustration and ambiquities attached to getting women in the community to participate in community programs; and, from the community member's point of view, the outcomes expressed the problems associated with their inability to participate.

5. *How will the learners' participation in the simulation give more clarity and understanding of the problems involved?*

Simulation No. 1 demonstrated how needs assessment and participation can make a dramatic difference in a program plan and that a poor program plan could be a detriment to the participants in that program. Simulation No. 2 demonstrated the importance for a community leader to have flexibility, personal skills and compassion, as well as the importance of understanding the complexity of problems that inhibit women's motivation and participation in the community.

In conclusion, these two simulations represent two forms of this type of learning activity. The variations in the form and content of simulation learning activities is as great as the problems that these activities might focus on. In other words, a trainer could create any number of roles, games, groups, etc. in a simulation learning activity as well as have the learners create a simulation learning activity themselves. It is important for the writer to remember these questions:

1. What is the problem(s) the learner will experience by his/her participation in this simulation?
2. What means does the simulation give the learners to resolve the problem(s)?
3. How do the strategies (roles, groups, games, etc.) in the simulation demonstrate the extent and the nature of the problem(s)?

4. How might what the learners 'did' and what they 'felt' during and after the simulation express the complexity of the real-life problem(s) in the simulation?
5. How will the learners' participation in the simulation give more clarity and understanding of the problems involved?

CONCLUSION

A simulation learning activity has some definite weaknesses and strengths that the reader should consider. The preparation of a simulation involves work and creativity from the trainer or instructor. A simulation is not an activity that one can just make up at a moment's notice. A simulation takes time to prepare and implement. Because simulations often involve written directions, they are sometimes limited to a literate audience. Also, once a simulation is prepared, the first time it is tried out the trainer can never be sure what will work well and what needs to be changed. A simulation learning activity almost has to go through some tryouts before it can be perfected as a learning activity. The development of a simulation learning activity is both a learning experience for the trainer as well as for the trainees.

The strengths of simulation learning activities override the weaknesses. A simulation is a very involving, highly participatory learning activity. It confronts the learner with real-life problems in an immediate way. A simulation is learner-centered and often learner-directed to the extent that the outcome and the unraveling of the simulation activity is up to the learners. As a nonformal education method, a simulation learning activity is rewarding and inspiring for both the trainers and the trainees because it involves human interaction in order to solve a real-life problem(s). And, this is closest to learning in the 'real' situation itself. Moreover, a simulation is controlled; there are learning goals, roles, and questions for general discussion. A simulation learning activity can then only replicate or imitate what the trainers and the trainees choose to describe and to act out. In this way a simulation learning activity is a controlled set of problems or a problem-solving situation closest to learning in the 'real' situation itself.

APPENDIX

Additional Tasks and Role Cards for Simulation 2: "Motivation and Participation Among Women in the Community"

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Task II. 30 Minutes

You have 30 minutes to have all the women at this meeting make a list of all the foods they eat in one week. After they make this list, they must figure out a way to record how many times each member of their family eats a particular food and how much of this particular food they eat. The general objective then is to have all the participants make a food chart and agree to fill it out in their homes for one week.

- -

Task III. 30 Minutes

You have 30 minutes to convince each member of your community to agree to change one food habit or dietary pattern on their food chart. This change of eating habit may be a change in the content of the food, the number of times the food is eaten, the addition of some foods that are missing from the chart. Some of the nutritional problems this particular family has will be written on one side of the community member's card. Your objective is to try to have the person agree to change one eating habit or dietary problem.

- -

Roles for Members of the Community

Card 2: Ibu Tuti (Side 1)

You decided to come to the meeting because your children are not healthy again. You are back to your old cheerful self and have looked forward to the next meeting with your friends. You think that something in the food your children ate caused their illness. It is important to you that you improve your family's diet.

Card 2: Ibu Tuti (Side 2)

DO NOT SHOW THIS SIDE OF THE CARD TO THE COMMUNITY LEADER

During this meeting you must make a decision and tell the group what you have decided to do:

YES You will agree to fill out the food chart if you do not have to buy any materials. You must be sure that all the materials needed to fill out this chart will be provided by the community leader.

NO You will not agree to fill out the food chart if you have to buy any materials.

- -

Card 2: Ibu Siti (Side 1)

At this meeting although you are very quiet, you are interested. Because your mother is old and sickly she has decided to come and to live with you. She will be moving into your house next week,and until she has adjusted to her new surroundings, you will be very busy.

Card 2: Ibu Siti (Side 2)

During the meeting you must make a decision and tell the other participants and the leader what you have decided:

YES You will agree to fill out the food chart if it does not require that you know how to read and to write. You do not know how to read and to write and feel very shy about it in front of the other women at the meeting.

NO You will not agree to fill out the food chart if you have to know how to read and to write to do it. You are willing to make check marks or something similar.

- -

Card 2: Ibu Rahayu (Side 1)

At this meeting you spend a lotof time joking. This leaves the impression that you are not very serious about nutritional problems in the community. But, in fact you feel very uncomfortable in the presence of Ibu Tuti.

Card 2: Ibu Rahayu (Side 2)

DO NOT SHOW THIS SIDE OF THE CARD TO THE COMMUNITY LEADER

During this meeting you must make a decision and tell the group as well as the community leader what you have decided:

YES You will agree to fill out the food chart if this group or the community leader can convince you that it is important. You and your family have usually been very healthy,so you do not think that there are any severe nutritional problems in your family or in the community.

NO You will not agree unless you can understand and be convinced that there will be a health or economic benefit to your family if you fill out this chart.

- -

Card 2: Ibu Mariana (Side 1)

You are happy to attend the meeting and participate. You are not sure why the topic is nutrition and diet. You would like to know why this topic was chosen and how people can change their eating habits if they do not have enough money to buy more food.

Card 2: Ibu Mariana (Side 2)

DO NOT SHOW THIS SIDE OF THE CARD TO THE COMMUNITY LEADER

During the meeting, you must make a decision and tell the participants and the community leader what you have decided:

YES You will agree to fill out the food chart if you can convince your husband that it will improve the health of your family and lead to economic benefits. Your husband does not understand how your family can eat better food without an increase in income.

NO You will not agree to fill out the food chart unless the group and the community leader can give you definite reasons how this chart will help the nutrition of your family.

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Card 3: Ibu Tuti (Side 1)

You were only able to fill out the chart for four days because one of your children became sick again. The child has very bad diarrhea.

It seems from your chart that the problem is not in the food your children eat but in the water they drink. Either the source of your family's drinking water is polluted or the water you store in your home becomes contaminated.

Card 3: Ibu Tuti (Side 2)

DO NOT SHOW THIS SIDE OF THE CARD TO THE COMMUNITY LEADER

During your conversation with the community leader, you must make a decision and tell the community leader what you decided:

YES You will agree to change one behavior in regards to your family's water drinking habits if the community leader can explain how and why this change of habit will improve your family's health.

NO You will not agree to change one behavior in regards to your family's water drinking habits if you do not have confidence in what the community leader explains to you.

- -

Card 3: Ibu Siti (Side 1)

You have filled out the entire chart. It seems that from the results of the chart, there is one outstanding problem in your family's diet. There is no fruit in your family's diet. As a result of this absence of fruit, your family is prone to get colds or the flu (according to the community leader).

Card 3: Ibu Siti (Side 2)

During your conversation with the community leader you must make a decision and tell the community leader what you decided:

YES You will agree to buy fruit for your family to eat if the community leader can convince you that fruit will not harm your family's health. Your mother convinced you a long time ago that your family had acquired a food taboo. This taboo prohibits your family from eating fruit, especially fruit with the colour red or orange. You are not convinced that this is true, but your mother is very influential in the family and at present she is living with you.

NO You will not agree to eat fruit unless the community leader can convince you that eating fruit will not cause harm to your family.

- -

Card 3: Ibu Rahayu (Side 1)

You filled out the chart but much of the information on it is not true. You exaggerated the amount of food your family eats because you wanted to have a better chart than Ibu Tuti. Even though the chart has misinformation, some problems are still evident; for example, the children are not getting enough milk or dairy products and the children are eating too much sugar, candy and not enough protein.

Card 3: Ibu Rahayu (Side 2)

DO NOT SHOW THIS SIDE OF THE CARD TO THE COMMUNITY LEADER

During your conversation with the community leader, you must make a decision and tell the leader what you have decided:

YES You will agree to change some food habits if you understand why these changes are necessary and if you are convinced that your children will not become too thin if they stop eating so much sugar. Also you want to know how you will get your children to eat foods thay they do not like and stop eating foods that they like. You also want to be sure that Ibu Tuti's family has dietary problems too.

NO You will not agree to change a family food habit unless the conditions above have been met.

- -

Card 3: Ibu Mariana (Side 1)

You have not filled in any of the food chart even though you told the group that you would. You feel very embarrassed and would rather not have to explain your negligence to the community leader.

Card 3: Ibu Mariana (Side 2)

DO NOT SHOW THIS SIDE OF THE CARD TO THE COMMUNITY LEADER

During this conversation with the community leader, you must make a decision and tell the community leader what you decided:

YES You will agree to fill in the chart if no one else in the community can see it. Your husband and you do not like the idea of other people in the community seeing what your family eats. You thought you would have to bring your chart to a community meeting. Your husband, in particular, feels that it would be bad luck if people saw your family's food chart.

NO You will not agree to fill in the chart unless the community leader can promise that no one but she will see the contents of your family's food chart and that the community leader will not talk to other people about what your family eats every week.

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